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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,960

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Olivier Le Moigne

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HARNESS, DICKEY & PIERCE, P.L.C.

P.O. BOX 8910

RESTON, VA 20195

EXAMINER

DILEVSKI, BORCE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,960	<b>Applicant(s)</b> LE MOIGNE ET AL.	
	<b>Examiner</b> BORCE DILEVSKI	<b>Art Unit</b> 4144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>January 10, 2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **Detailed Action**

1. Claims 1-18 have been examined and are pending.

### ***Information Disclosure Statement***

2. An initialed and dated copy of Applicant's IDS form 1449 submitted on 1/10/2006 is attached to the instant office action. All references on applicants IDS were considered except those in the non patent literature section due to the fact that applicant did not provide a copy of those references.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 14-18** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. **Claims 14-18 claim a data packet with a certain data structure and a packet generator which is by specification software based. These claim limitations do not fall into any statutory category of matter of process, machine, manufacture, or composition of matter.**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/098098 A2 to Zheng et al (From IDS).

**As per claim 1, Zheng et al teaches a method of operating a node of a packet communication network, in particular an IP router, comprising the steps of:**

**a) the node receiving a packet (10; 10a) from the network** (Page 9 Lines 29-30, A method is described as having a flow of data packets, each data packet has to be routed through the network);

**b) the node receiving information (13) independent of the protocols of OSI layers 5 to 7 of the packet and relating to at least one of the following characteristics: the type of data transported in the packet, the source of the data transported in the packet other than the network address of the source of the packet, and the addressee of the data transported in the packet other than the network address of the source of the packet** (Page 9 Lines 29-35 and Page 10 Lines 1-7, a flow identity number (information) that is associated with the home IP address and a sequence number (The sequence

number identifies which packet in a group of packets that certain packet is, the sequence number is therefore based on the type of data in the packet) is written into the data packet where the flow identity number deals with routing the packet in a flow from source to destination and is therefore a layer 3 protocol);

**c) the node processing the packet (10; 10a) as a function of said description** (Page 10 Lines 23-35 and Fig. 3, Each packet is examined and routed based on it's flow identity number to form a flow).

**As per claim 2, Zheng et al teaches a method according to claim 1, characterized in that the information received in the step b) is independent of the protocols of OSI layers 4 to 7 of the packet** (Page 10 Lines 23-35, A flow identity number (information) is received and used to route the packets, this is a layer 3 protocol).

**As per claim 3, Zheng et al teaches a method according to claim 1, characterized in that said information (13) is contained in the packet (10)** (Page 10 Lines 4-7 and Lines 23-28, The flow identity number (information) is written into the data packet and it is read by the nodes the packets passes through to form a flow),

**the step b) comprising the node reading said information in the packet** (Page 11 Lines 24-26, The flow identity number (information) in the header is

read by every node along the packets route to it's destination).

**As per claim 4, Zheng et al teaches a method according to claim 3, characterized in that said information (13) is contained in the header (11) conforming to the protocol of OSI layer 3 of the packet (10)** (Page 11 Lines 22-24, The flow identity number (information) is written into the header fields of every packet in the flow of packets),

**the step b) comprising the node reading said information in the header conforming to the protocol of OSI layer 3 of the packet** (Page 11 Lines 24-26, The flow identity number (information) in the header is read by every node along the packets route to it's destination).

**As per claim 5, Zheng et al teaches a aethod according to claim 1, characterized in that the packet (10a) contains an identifier (14) of said information** (Page 7 Lines 34-35 and Page 8 Lines 1-2, The next header field (identifier) identifies if there are any extension headers such as the header that holds the flow identity number (information)),

**the step a) comprising the node reading the identifier** (Page 11 Lines 24-26, The flow identity number (information) in the header is read by every node along the packets route to it's destination).

**As per claim 6, Zheng et al teaches a method according to claim 5, characterized in that the identifier (14) is contained in the header (11) conforming to the protocol of OSI layer 3 of the packet (10a)** (Page 7 Lines 34-35 and Page 8 Lines 1-2, The next header field (identifier) identifies if there are any extension headers such as the header that holds the flow identity number (information)),

**the step a) comprising the node reading the identifier in the header conforming to the protocol of OSI layer 3 of the packet** (Page 11 Lines 24-26, The flow identity number (information) in the header is read by every node along the packets route to it's destination).

**As per claim 7, Zheng et al teaches a method according to claim 5, characterized in that the step b) comprises the node receiving another packet (15a; 15b) from the network** (Page 9 Lines 29-30, A method is described as having a flow of data packets, each data packet has to be routed through the network),

**said other packet containing said information (13)** (Page 9 Lines 29-35 and Page 10 Lines 1-7, a flow identity number (information) that is associated with the home IP address and a sequence number (The sequence number identifies which packet in a group of packets that certain packet is, the sequence number is therefore based on the type of data in the packet) is written into the data packet where the flow identity number deals with routing the packet in a flow

from source to destination and is therefore a layer 3 protocol).

**As per claim 8, Zheng et al teaches a method according to claim 7, characterized in that said information (13) is contained in the header (11) conforming to the protocol of the OSI layer 3 of said other packet (15a)**

(Page 11 Lines 22-24, The flow identity number (information) is written into the header fields of every packet in the flow of packets),

**the step b) comprising the node reading said information in the header conforming to the protocol of OSI layer 3 of said other packet** (Page 11 Lines 24-26, The flow identity number (information) in the header is read by every node along the packets route to it's destination).

**As per claim 9, Zheng et al teaches a method according to claim 7, characterized in that said information (13) is contained in the body (12) conforming to the protocol of OSI layer 3 of said other packet (15b)** (Page 7 Lines 29-34, The extension headers which contain the flow identity number are part of the payload),

**the step b) comprising the node reading said information in the body conforming to the protocol of OSI layer 3 of said other packet** (Page 11 Lines 24-26, The flow identity number (information) in the header is read by every node along the packets route to it's destination).

**As per claim 10, Zheng et al teaches a Method according to claim 7, characterized in that said other packet (15a; 15b) further contains the identifier (14) (Page 10 Lines 4-7 and Lines 23-28, The flow identity number (information) is written into the data packet and it is read by the nodes the packets passes through to form a flow),**

**the step b) comprising the node reading the identifier in said other packet (Page 11 Lines 24-26, The flow identity number (information) in the header is read by every node along the packets route to it's destination).**

**As per claim 11, Zheng et al teaches a method according to claim 10, characterized in that the identifier (14) is contained in the header (11) conforming to the protocol of OSI layer 3 of said other packet (15a; 15b) (Page 11 Lines 22-24, The flow identity number (information) is written into the header fields of every packet in the flow of packets),**

**the step b) comprising the node reading the identifier in the header conforming to the protocol of OSI layer 3 of said other packet (Page 11 Lines 24-26, The flow identity number (information) in the header is read by every node along the packets route to it's destination).**

**As per claim 14, Zheng et al teaches a Data packet (10) for a packet communication network comprising information independent of the protocols of the OSI layers 5 to 7 of the packets and relating to at least one**

**of the following characteristics: the type of data transported in the packet, the source of the data transported in the packet other than the network address of the source of the packet, and the addressee of the data transported in the packet other than the network address of the source of the packet** (Page 9 Lines 29-35 and Page 10 Lines 1-7, a flow identity number (information) that is associated with the home IP address and a sequence number (The sequence number identifies which packet in a group of packets that certain packet is, the sequence number is therefore based on the type of data in the packet) is written into the data packet where the flow identity number deals with routing the packet in a flow from source to destination and is therefore a layer 3 protocol).

**As per claim 15, Zheng et al teaches a data packet according to claim 14, characterized in that said information is independent of the protocols of OSI layers 4 to 7 of the packet** (Page 10 Lines 23-35, A flow identity number (information) is received and used to route the packets, this is a layer 3 protocol).

**As per claim 16, Zheng et al teaches a data packet according to claim 14, characterized in that said information is contained in the header (11) conforming to the protocol of OSI layer 3 of the packet** (Page 11 Lines 22-24, The flow identity number (information) is written into the header fields of

every packet in the flow of packets).

**As per claim 17, Zheng et al discloses a data packet according to claim 16, characterized in that the packet conforms to the Internet Protocol, said information being contained in the Internet Protocol header** (Page 6 Lines 24-28 and Page 7 Lines 29-32, It is described that the data packets follow IPv6 architecture and IPv6 also allows for extension headers where the flow identity number (information) would be).

**As per claim 18, Zheng et al teaches a generator of packets as defined by claim 14** (If the network or node is receiving a packet then the packet therefore must be generated at some point to exist).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng et al and further in view of US Patent US 6,188,674 B1 to Chen et al.

**As per claim 12, While Zheng et al teaches the method according to claim 10, Zheng et al does not teach but Chen et al teaches characterized in that it comprises, after the step b), a step of the node sending to a database (21) the identifier (14) and said information (Chen et al, Col. 6 Lines 34-38,**

There is a flow identification table (database) that contains routing information about specific packets in a flow including a local index (identifier) and destination (information) and priority information, this table must somehow be formed by the packets sending their data to fill the table (database)

Therefore, it would have been obvious to one of ordinary skill in the art to modify Zheng et al's invention with the flow identification table use of Chen et al because (Chen et al, Col 1 Lines 57-67) monitoring packet loss due to such things as congestion can improve the number of packets that are lost as well as packet routing).

**As per claim 13, While Zheng et al teaches the method according to claim 5, Zheng et al does not teach but Chen et al teaches characterized in that it comprises, after the step a) and before the step b), a step of the node**

**interrogating a database (21) using the identifier (14)** (Chen et al, Col. 6 Lines 34-38, A method is described where a local index (identifier) in a packet is used to search a flow identification table (database) for information

Therefore, it would have been obvious to one of ordinary skill in the art to modify Zheng et al's invention with the flow identification table use of Chen et al because (Chen et al, Col 1 Lines 57-67) monitoring packet loss due to such things as congestion can improve the number of packets that are lost as well as packet routing).

### ***Conclusion***

**6. Prior arts made of record, not relied upon:**

US 6,704,794 B1 to Kejriwal et al discloses cell based reassembly for packet based networks

US 2002/0126672 A1 to Chow et al discloses a method and apparatus for a flexible and reconfigurable packet classifier using content addressable memory

US 2005/0089033 A1 to Gupta et al discloses a method, system, and program for constructing a packet

US 7,218,632 B1 to Bechtolsheim et al discloses a packet processing engine architecture

US 2004/0109473 A1 to Lebizay et al discloses interconnecting network processors with heterogeneous fabrics

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US 7,058,027 B1 to Alessi et al discloses systems and methods for asynchronous transfer mode and internet protocol

US 7,095,742 B2 to Kagnoi et al discloses a packet processing unit

US 2002/0188871 A1 to Noehring et al discloses a system and method for managing security packet processing

US 2003/0084186 A1 to Yoshizawa et al discloses a method and apparatus for programmable network router and switch

US 6,356,951 B1 to Gentry discloses a system for parsing a packet for conformity with a predetermined protocol using mask and comparison values included in a parsing instruction

US 6,389,468 B1 to Muller et al discloses a method and apparatus for managing network flow in a high performance network interface

US 7,124,205 B2 to Craft et al discloses a network interface device that fast path processes solicited session layer read commands

US 7,236,488 B1 to Kavipurapu discloses an intelligent routing switching system

US 6,275,861 B1 to Chaudri et al discloses a method and apparatus to identify flows in data systems

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BORCE DILEVSKI whose telephone number is (571)270-7154. The examiner can normally be reached on M-F 7:30AM - 5:00PM or Flexible.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi Arani can be reached on (571)272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BD

/Taghi T. Arani/  
Supervisory Patent Examiner, Art Unit 4144